

REMARKS

In the aforesaid Office Action, claims 33-36 and 38 were rejected under 35 USC §102(b) as being anticipated by Trotta (U.S. Patent No. 5,620,649), claims 33-37 were rejected under 35 USC §102(b) as being anticipated by Zhong (U.S. Patent No. 6,048,620), claim 41 was rejected under 35 USC §103(a) as being unpatentable over Zhong, claim 39 was rejected under 35 USC §103(a) as being unpatentable over Trotta in view of Zhong, and claim 40 was rejected under 35 USC §103(a) as being unpatentable over Trotta in view of Okuda (U.S. Patent No. 6,053,939). Claims 33-41 are pending.

The Examiner rejected claims 33-37 under 35 USC §102(b) as being anticipated by Zhong, and claim 41 under 35 USC §103(a) as being unpatentable over Zhong, stating, with regard to claim 41, that although Zhong does not disclose that the covalently bonded or grafted functionality has a thickness of 10 to 150 nm, it would have been obvious to one having ordinary skill in the art to optimize the thickness of the covalently bonded functionality given that the thickness of the first layer can be controlled by controlling the amount of crosslinking agent present in the solution. However, in Zhong, the balloon has a coating of a polymer and a crosslinking agent (applied as an aqueous solution allowing the crosslinking agent to cross link the polymer), and therefore the coating has a thickness resulting from the aqueous solution coating procedure which is a function of the coating method as well as the amount of solids (the amount of polymer and crosslinking agent) in the solution. Zhong discloses that the aqueous coating solutions can be applied to the substrate by dipping or brushing. The Examiner has

provided no teaching or suggestion that the dipping or brushing coating methods disclosed by Zhong for applying the aqueous solution onto the balloon layer of Zhong produce a film having a thickness on the order of nanometers. Zhong discloses that the aqueous solution coatings have a thickness of about 2-3 micrometers (see column 8, line 30), and the Examiner has provided no teaching or suggestion showing that the coating thickness could be reduced by an order of magnitude or more, to produce Applicants' plasma polymerized functionality film having a thickness of about 10 to about 150 nanometers. Thus, Zhong does not disclose or suggest a balloon having a film of a plasma polymerized functionality with a thickness of about 10 to about 150 nm.

The Examiner rejected claims 33-36 and 38 under 35 USC §102(b) as being anticipated by Trotta. However, regarding claim 38, Trotta does not disclose or suggest a layer of the balloon having a portion with an inner surface which has the plasma polymerized functionality bonded thereto, AND which is bonded to the shaft. Instead, in Trotta, the inner surface of the first (e.g., inner) layer of the balloon (i.e., the inner most "first layer 10" of Trotta) does not have the covalently bonded functionality bonded thereto (i.e., the "second layer 20" of Trotta), and the inner surface of the second (e.g., outer) layer of the balloon (i.e., the outer most "first layer 24" of Trotta) is not bonded to the shaft (but is instead bonded to the inner layers of the balloon) (see Fig. 2 of Trotta). Therefore, Trotta does not disclose or suggest a layer of the balloon which, along at least a portion of the proximal and distal skirts sections of the balloon, has an inner surface which has the plasma polymerized functionality bonded thereto, and which is bonded to the shaft, as required by claim 38.

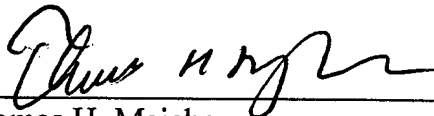
Attached hereto is a marked-up version of the changes made to the claims by the current Amendment. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE."

In light of the above amendments and remarks, applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

Claims 33, 38 and 41 are amended as follows:

33. (Amended) A balloon catheter, comprising
- a) a multilayer balloon comprising a polymeric first layer having a plasma polymerized functionality covalently bonded to at least a section of a first surface of the first layer, and a polymeric second layer bonded to the section of the first surface of the first layer, the plasma polymerized functionality forming a film having a thickness of about 10 to about 150 nanometers; and
 - b) an elongated shaft having an inflation lumen, and bonded to the balloon, so that an interior of the balloon is in fluid communication with the inflation lumen.
38. (Amended) The balloon catheter of claim 33 wherein the balloon has proximal and distal skirt sections bonded to the shaft, and the first layer along at least a portion of the proximal and distal skirts sections of the balloon has an inner surface which has [a] the plasma polymerized functionality bonded thereto, and which is bonded to the shaft.
41. (Amended) The balloon catheter of claim 33 wherein the plasma polymerized functionality comprises a film having a thickness of about [10] 50 nm to about [150] 125 nm.